

Sustainability & Global Fixed Income

ESG Considerations for Fixed Income Investors

Fixed income investors are increasingly subject to ESG mandates as global client demand for sustainable investing accelerates. In this report – the first in a series – we present our qualitative views on sustainability/ESG across fixed income asset classes.

We expect that interest in adopting sustainable investing strategies among fixed income investors will continue accelerate in 2021...

In 2020, flows into ESG-focused fixed income funds grew by 1.2X y/y and AUM currently stands at \$304bn. Of the 803 ESG-focused fixed income funds identified by Morningstar, 15% (117) were launched last year. We expect that the global economic recovery post-COVID will be a tailwind for growth in fund launches and flows.

...but acknowledge that sustainable investing strategies face a number of critical challenges in order to be widely adopted in fixed income markets.

There are material differences in the readiness of each fixed income asset class for sustainable investing strategies, and data availability remains *the* key hurdle. We see corporate credit as the most advanced asset class, due to its natural alignment with equities and improving disclosure of ESG data. However, the quality of ESG data can be poor, and limited disclosure from private companies makes applying sustainable investing strategies extremely challenging in many parts of the high yield, leveraged loan, and CLO markets. The US securitized products market has enormous potential for ESG investors looking for exposure to green buildings and affordable housing, but the lack of transparency on loan pools, complicated structuring, and broad heterogeneity of the instruments makes a one-size-fits-all approach untenable. While a broad adoption of sustainable investing will take time in fixed income due to the complexity of diversity of the market, this report qualitatively outlines our approach.

Sustainable investing is not a single, prescriptive approach, but rather incorporates a spectrum of investment approaches.

We see these approaches as 1) **products**, which are dedicated ESG strategies that require identifying an investible universe aligned with ESG objectives, and 2) **processes**, in which ESG considerations are integrated into mainstream fundamental analysis ([Exhibit 10](#)). Much like a proprietary macro view, each sustainability strategy will differ from asset manager to asset manager – and even within asset managers – as well as from PM to PM. Ultimately, we think ESG integration will drive a broad adoption of sustainable investing among mainstream fixed income investors. That said, we think dedicated ESG product strategies will also continue to attract AUM as awareness grows among asset owners.

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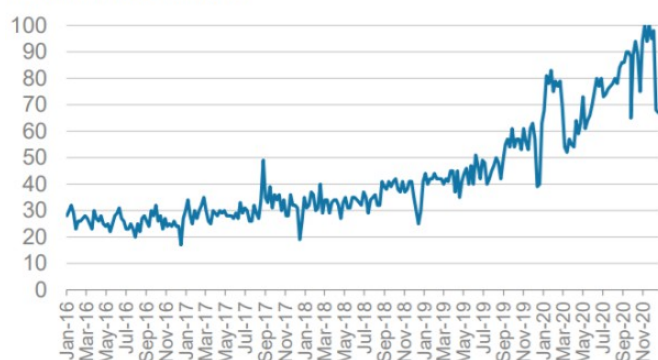
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Sustainable Investing, ESG, & the Fixed Income Markets

Sustainable investing is a field of increasing focus among a spectrum of financial stakeholders. A societal shift toward more awareness and action around sustainability considerations has increased interest in sustainable investing and ESG (Exhibit 1). According to Morgan Stanley's 2019 Sustainable Signals survey, 85% of individual US investors are interested in sustainable investing versus 75% in 2017. This attitude is even more evident among millennial investors, with nearly 95% interested in sustainable investing (Exhibit 2). With an oncoming wave of over \$30 trillion in wealth transitioning from the baby boomer generation to millennials in the coming decades, the weight of ESG factors among investment criteria is likely to continue to increase.

Exhibit 1: Google Searches for "ESG" demonstrate accelerating interest in the field

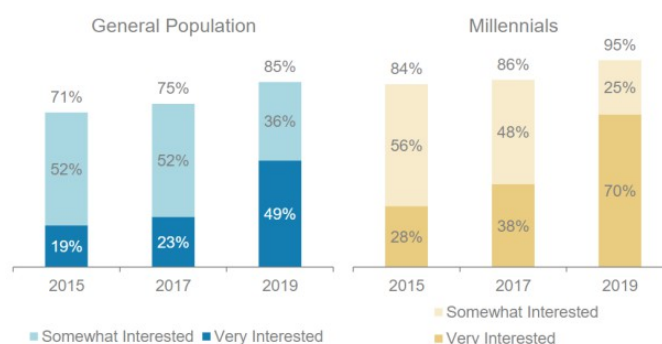
ESG Internet Searches



Source: Google Analytics.

Note: Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term.

Exhibit 2: When asked "How interested are you in sustainable investing?", survey results from September 2019 showed a jump in 2019 and the highest interest among millennials



Source: Morgan Stanley Institute for Sustainable Investing, Sustainable Signals September 2019

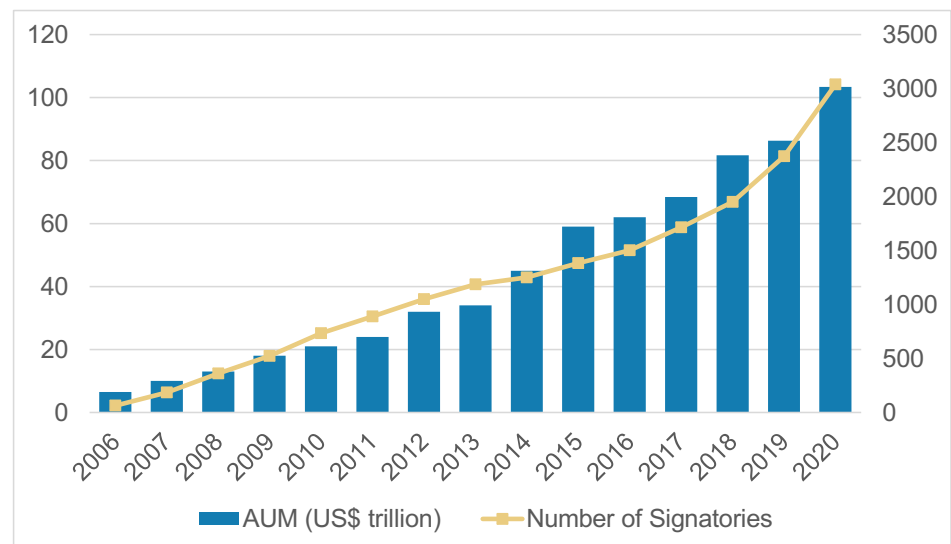
Within this, ESG – environmental, social, and governance – criteria are comprised of a diverse set of potentially material considerations, such as carbon emissions, human capital management, and shareholders' rights, that we think are key components in the development of sustainable organizations and societies. Asset owners, corporates, institutional investors, retail investors, and governments are increasingly using an "ESG lens" to identify and analyse how these considerations can have a positive or negative impact on both the long-term growth and returns profiles of their investment, as well as on various aspects of society and the environment.

While ESG criteria are not always explicit inputs into financial statements or models, they often have financial consequences. For instance, poor corporate culture can lead to high levels of employee attrition increasing the costs to hire and train new employees, leaving less free cash flow to service debt. Alternatively, poor environmental risk management could trigger large regulatory penalties or litigation.

For some investors, ESG issues are also analysed to understand the consequences (intended or unintended) of "negative externalities" of business operations and governments on communities or society. For instance, investors may seek to minimize their exposure to issuers contributing to climate change across their investment portfolios.

Sustainable Investing involves incorporating environmental, social, and governance criteria alongside traditional financial metrics in investment decision-making. The approach gained prominence following the inception of the United Nations' Principles for Responsible Investment (PRI) at the NYSE in 2006 ([Exhibit 3](#)). According to the PRI, "the Principles were developed by investors, for investors. In implementing them, signatories contribute to developing a more sustainable global financial system." Signatories to the PRI [agree](#) to six principles and commit to the following: (1) incorporating ESG issues into investment analysis and decision-making, (2) incorporating ESG issues into ownership policies, like corporate engagement, and (3) advancing disclosure on ESG issues at portfolio companies.

Exhibit 3: Signatories of the Principles for Responsible Investment represent \$100tr in AUM; \$38tr are fixed income assets

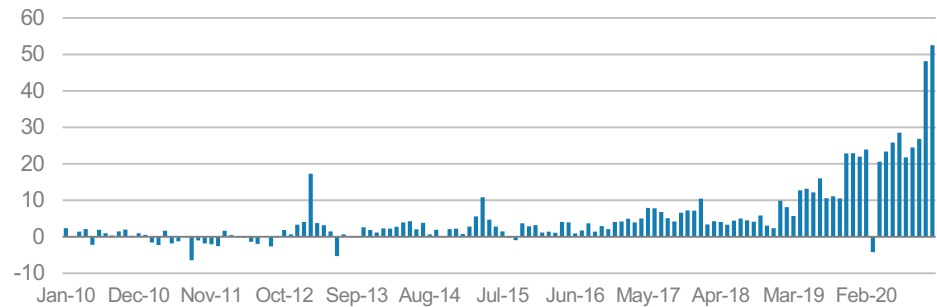


Source: UNPRI.org, data retrieved 2/7/2021

Sustainable investing continues to gain momentum. It is difficult to define the exact size of the sustainable investing landscape. However, we note that at the end of 2020, there were over 3,000 PRI signatories, comprising asset owners, investment managers, and service providers, who together account for \$103.4 trillion in assets under management. The volume of PRI AUM has increased at a CAGR of 20% over the last 15 years, while the number of signatories has grown at 28%. Fund flow data from Morningstar ([Exhibit 4](#)) show the evolution of flows into ESG-focused funds over the past 10 years. Flows into equities and fixed income EGS funds accelerated sharply over the past two years, with more than \$50bn in inflows in December 2020.

Exhibit 4: Annual net inflows grew at a 39% CAGR between 2010 and 2020

ESG Funds Flows (Equities & Fixed Income), 2010-2020

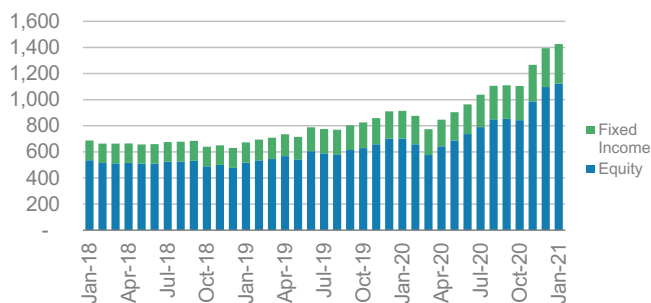


Source: Morningstar

The PRI reports that 1,700 signatories own or manage ~ \$38 trillion in fixed income assets. In addition, according to data from Morningstar, there are now 803 ESG-focused fixed income mutual funds and ETFs, the oldest of which were established in the early 1970s. In 2020, 117 new ESG-focused fixed income funds were launched globally ([Exhibit 6](#)), and total AUM in these funds stands at an estimated \$304bn ([Exhibit 5](#)). Monthly flows into ESG-focused fixed income funds grew 1.2x y/y in 2020 ([Exhibit 8](#)), and total AUM has grown 2X over the last three years. At present, fixed income assets represent roughly one-fifth of ESG-focused AUM globally, but we expect this proportion to increase over the next year as adoption of ESG strategies accelerates among fixed income investors. As [Exhibit 7](#) shows, the growth of annualized net inflows into ESG-focused fixed income funds (+35%) has outpaced flows into non-ESG funds (+7%), and flows recovered faster in ESG funds after the COVID-linked drawdown in March last year ([Exhibit 8](#)).

Exhibit 5: Fixed income lags equities in ESG adoption, but AUM in ESG-focused FI funds have grown 2X since 2018

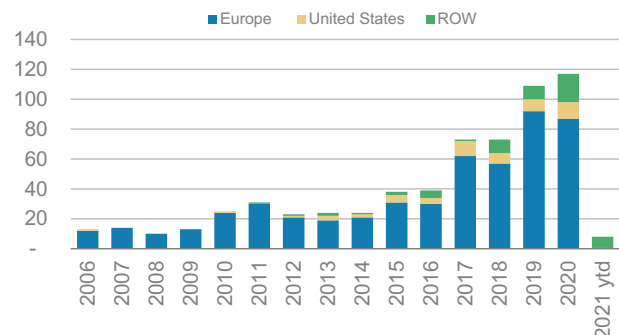
Equity vs Fixed Income AUM (\$bn)



Source: Morningstar

Exhibit 6: 117 ESG-focused FI funds launched in 2020, 74% domiciled in Europe

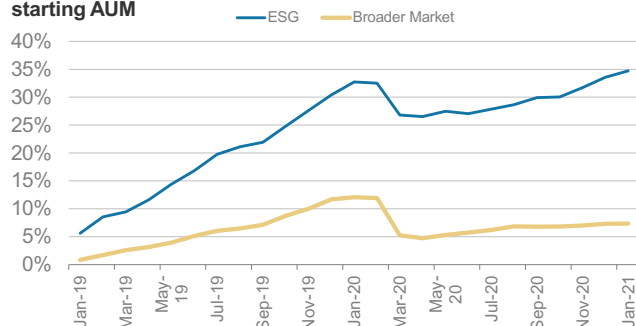
Fixed Income ESG Fund Launches



Source: Morningstar

Exhibit 7: ESG-focused funds are outpacing broad market funds at 35% annualized net inflows vs 7% in broader market

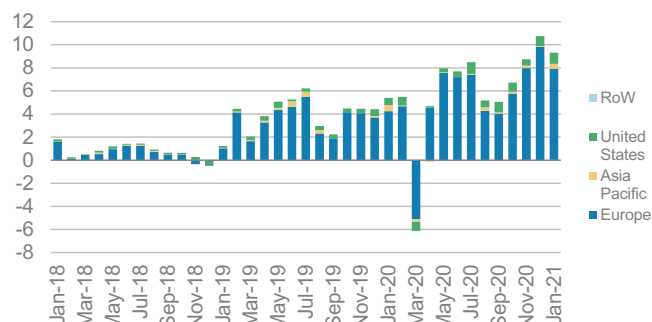
Fixed Income: Annualized net inflows/ outflows as % of starting AUM



Source: Morningstar

Exhibit 8: Flows into ESG-focused fixed income funds reached a historic high of \$11bn in December 2020, 91% of flows that month came from Europe

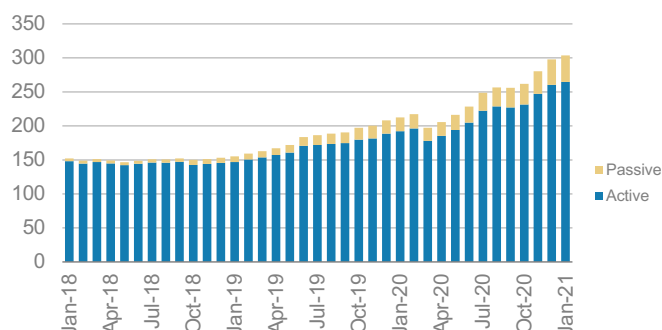
Fixed Income: ESG Fund Flows by Region (\$bn)



Source: Morningstar

Exhibit 9: Passive AUM into ESG fixed income funds has grown at 75% CAGR since 2018

Fixed Income AUM: Passive vs Active (\$bn)



Source: Morningstar

Sustainable Investing is not a single-prescriptive approach, but rather incorporates a spectrum of investment approaches (see following section [Sustainable Investing: Products & Process](#)). While it is a natural tendency to want to declare an investment "ESG" or "not ESG," that oversimplifies the diversity of ESG investing approaches. Rather, it is up to investors to determine their own sustainable investing strategy, based on any number of considerations such as client demand, market pricing of ESG factors and regulatory considerations. Much like a proprietary macro view, each sustainability strategy will differ from asset manager to asset manager – and even within asset managers – as well as from PM to PM. For example, while some investors will use a negative screen for sectors like tobacco, gambling, or alcohol, others may tilt their portfolios toward best-in-class ESG performers to take advantage of lower volatility and the potential for outperformance.

For fixed income investors, the approach will also vary depending on the asset class. In this report, we begin to outline a qualitative framework for approaching ESG in fixed income. We plan to feature deep dives into asset classes in future reports.

Sustainable Investing: Products & Process

As shown in [Exhibit 10](#) below, we view sustainable investing in terms of investment *processes* and *products*. Sustainable investment processes involve integrating ESG factors into a fundamental investment process. Sustainability products, on the other hand, are dedicated sustainability fund strategies. ESG integration is the most widely used sustainable investing strategy among fixed income investors.

Exhibit 10: Sustainable investing can be segmented into products and processes

MINIMIZE TARGET IMPACT		ESG PRODUCTS		MAXIMIZE TARGET IMPACT
Negative Screening	Positive Screening	Thematic Exposure	Impact Investing	
- Manage undesired ESG exposure by screening out sectors or products with specific criteria – common exclusions include tobacco, fossil fuels, and high interest credit card ABS. - Negative screening can be done due to values/ethical concerns, regulatory concerns, physical risk or sector-wide ESG headwinds.	- Investing in all sectors within the market, but reducing the investment universe to include only the most sustainable products within each asset class. - Common strategies include using ESG scores or market sentiment to identify ESG leaders or improvers.	- Focus on fixed income products that offer exposure to particular sustainability themes such as low carbon, affordable housing, access to services. - Investors look for debt of issuers with meaningful exposure to ESG themes. ESG labeled debt is often aligned with thematic strategies.	- Investing in fixed income products to deliver a <i>measurable</i> positive social or environmental impact. - Investors look for debt securities from issuers where their impact on specific ESG objectives is quantifiable. Some ESG labeled debt can be aligned with impact strategies.	
ESG PROCESS - INTEGRATION				
- ESG integration is a mainstream, process-focused investment strategy that involves incorporating environmental, social and governance factors into product- and portfolio-level analysis. It is often used in tandem with ESG product strategies. - ESG integration usually involves a financial materiality filter, to limit inclusion of ESG factors to only those that could materially impact the value of an investment. - For fixed income investors, ESG integration is mostly an exercise in mitigating downside risk of ESG factors—i.e. consideration of ESG-linked regulatory risks, ESG event risk, litigation risk, etc. - A PM's ESG views are similar to their macro views—each PM may have different, proprietary convictions about what matters in the context of their investment process, goals, and client demands. PMs generally retain discretion over final investment decisions.				

Source: Morgan Stanley Research

Process: Integrating ESG Into Mainstream Strategies

ESG integration has become a core requirement for investment managers, even among mainstream funds. An ESG integration investing approach simply involves incorporating material ESG factors into fundamental analysis of debt securities. This could include assessing whether an issuer's environmental performance puts them at an increased risk for litigation or fines, and how that might affect the capital available for debt servicing. Additionally, an issuer's ESG record may impact earnings trends, in turn impacting

leverage. Alternatively, ESG risks could affect future access to capital markets and impact an issuer's cost of capital. **We strongly believe that all active investors should consider material ESG factors in their fundamental analyses, as doing so can aid in understanding whether all externalities have been priced into a particular security.**

There is no 'right answer' in an ESG integration process. ESG integration requires making a judgement call on the nature and magnitude of ESG risks and opportunities and the time horizon over which they might play out. In this way, it is similar to a PM's convictions about how the macro environment will unfold – it's inherently subjective and subject to debate. As an example, a PM integrating ESG factors into their analysis of investing in the bonds of a tobacco company could come to the following investment conclusions:

1. The long-term outlook for the tobacco sector is interpreted as negative, given declining smoking rates in developed markets, increasing regulation, and growing public health awareness across EM markets, making it difficult for investors to underwrite long-term cash flows: *Do not invest.*
2. Regulatory risk in the tobacco sector is a long-term concern: *Invest in 5-year tobacco bonds, but not 30-year tobacco bonds.*
3. PM likes returns of tobacco bonds within current macro environment. Social risk is not perceived as a concern, as tobacco is likely to remain legal long term: *Invest long term for increased yield.*

Each decision made above is an example of a successful ESG integration process.

ESG factors matter across fixed income and can contribute significantly to downside risks. Historically, we believe that many ESG risks were incorporated into fixed income analysis as simply "credit risk." Below we illustrate a few of ways ESG considerations can factor into commonly considered risk factors in fixed income asset classes:

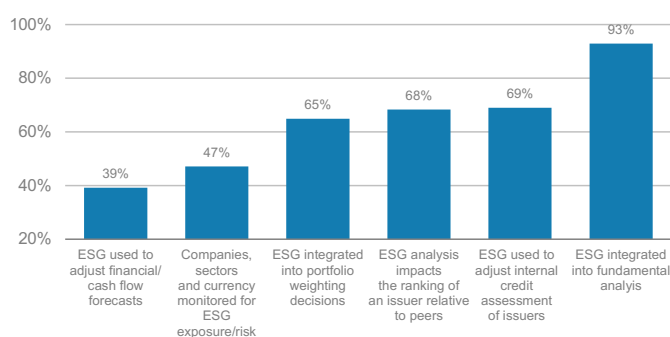
- **Physical Risk** - We think that physical risk to assets from the increasing frequency of extreme weather events is a material risk across most fixed income asset classes. This is particularly true for residential and commercial mortgage-backed securities. We discussed the implications for CMBS in our report, [Sustainability, REITs, P&C Insurance and CMBS: Rising Flood Risk: How Much and at What Cost?](#), and annually assess risks due to hurricanes in the US.
- **Sector Risks** - In January, S&P Global [announced](#) that it was placing a number of integrated oil & gas companies on negative credit watch, citing increasing risks to credit quality from "the energy transition, price volatility, and weaker profitability."
- **Credit Risk** - Multiple [studies](#) have [found](#) that ESG is linked to lower risk in EM sovereign credit, as evidenced by issuers' curves that are less steep than peers and tighter CDS spreads.
- **Event Risk** - Poor performance on ESG factors can lead to significant litigation, fines, and settlements. For instance when the US Environmental Protection Agency announced in September 2015 that VW's emissions manipulation program violated environmental law, VW's credit default swaps (CDS) spreads nearly tripled by the end of the week.

As broad ESG integration grows, we expect ESG factors to more meaningfully influence credit spreads and pricing – however, we acknowledge that this could present a paradox for fixed income investors. We think ESG-friendly debt instruments may eventually be consistently more expensive than peers, and that this could make them less desirable to some FI investors long term. However, if the preferred pricing lowers the cost of debt servicing to companies, this could alternatively be seen as positive for the credit fundamentals. However, at this stage in the development of the market it's difficult to know if the lower cost of debt servicing will have a material effect on spreads.

Unlike in equities, where there is theoretically unlimited upside to ESG-exposed stocks, for creditors, the ESG value proposition is essentially the mitigation of downside risk and not necessarily the creation of financial value. Moreover, an inherent conflict for fixed income investors is that not all ESG-positive actions an issuer does will be good for credit on a more fundamental level, even when it benefits the equity. Achievement of sustainability objectives often requires expenditures that may leave less available cash flow for debt servicing. For example, an issuer might lever up significantly to achieve a green transition, or divert FCF to green projects, thus reducing credit fundamentals. Each fixed income investor has to decide how to interpret an issuer's sustainability activities and expenditures in the context of their investment. **That said, asset owners are driving the adoption of ESG in fixed income asset management long term, and we expect to see this adoption to continue even if there are incrementally higher costs for ESG-friendly debt.**

Exhibit 11: Fixed Income PRI signatories reported a variety of approaches to ESG integration

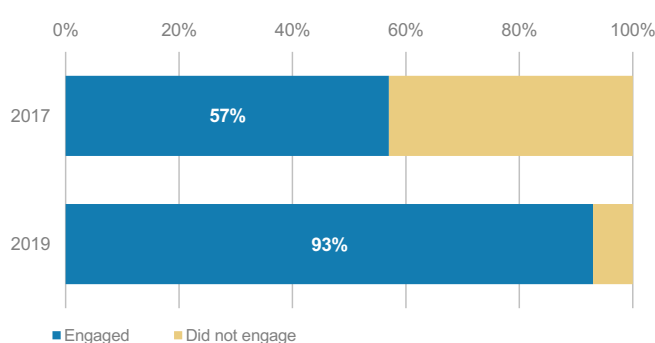
Select ESG integration Strategies among PRI Signatories



Source: UNPRI

Exhibit 12: Between 2017 and 2019, issuer engagement among PRI fixed income signatories increased 63%

Engagement among fixed income PRI Signatories



Source: UNPRI

Notably, an ESG integration strategy can be paired with engagement with issuers, particularly for corporate credit. ESG performance cannot always be neatly condensed into metrics that are easily reported by issuers and directly incorporated into valuation models by analysts and investors – ESG engagement can help investors better understand management's strategy for ESG risk management. Fixed income investors, despite not being corporate owners, are increasingly engaging with corporates to augment their ESG investing strategies (Exhibit 12). Engaging with corporates provides investors with additional granularity that can strengthen or diminish the convictions developed in the integration process. Active fundamental investors can also use the process of engagement to influence issuer to improve performance on the ESG issues that they believe will affect the value of corporate debt. A review of the 803 ESG-

focused fixed income funds in Morningstar shows that 22% use an active engagement as part of their fund strategy.

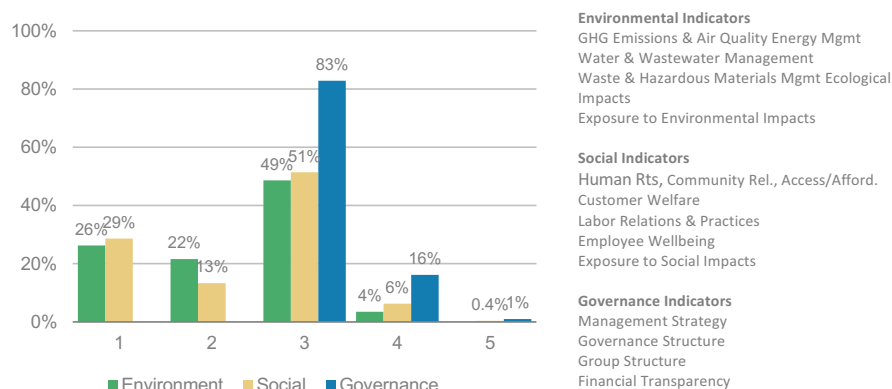
ESG in Credit Ratings

Credit ratings will capture some ESG downside risks at the issuer and sector levels...

The three major global credit rating agencies (CRAs), [Standard & Poor's](#), [Moody's](#) and [Fitch](#), each have ESG offerings to help investors navigate how ESG could affect the credit ratings of issuers and instruments in their portfolios. Given the high correlation among credits scoring the three top credit rating agencies (CRAs), we assume that all take a broadly similar approach to incorporating ESG into their ratings. Fitch's highly transparent ESG relevance scores illustrate how CRAs look at ESG across [corporate sectors](#), [sovereigns](#), and [structured finance](#). For all issuers across all asset classes, Fitch sees governance factors as most relevant. This is unsurprising, as good governance and cash flow management are key determinants of the fixed income bottom line – assessing whether investors will get their money back with interest. [Exhibit 13](#) shows Fitch's ESG relevance scores for non-financial corporates. Fitch assigns 14 ESG factors ratings from 1 (least relevant) to 5 (most relevant). Using a threshold of 10% – i.e., a score of 4 means 10% or more of companies in the sector receive a ratings of 4 or more, etc.– all governance factors received the highest relevance scores from 3 (neutral) to 5 (credit-relevant). The relevance of "E" and "S" factors is more variable across sectors: for example, for "exposure to social impacts," tobacco receives a score of 4, while business services receives a score of 1.

Exhibit 13: Governance factors have the greatest potential for impact on credit ratings

Distribution of Fitch ESG relevance scores (1-5) for Non-Financial Corporate Sectors



Source: Fitch, Morgan Stanley Research. Note: 1=irrelevant to issuer & sector, 2=irrelevant to issuer but relevant to sector, 3=minimally relevant to rating, 4=relevant to rating but not a key rating driver, 5=highly relevant and a key rating driver. Also, Fitch's Non-Financial Corporates ESG Relevance Map shows the highest ESG Relevance Score for a given fact that applies to at least a selected percentage of a given sector. In our version, we used the default 10% standard. So if a sector is rated 4, at least 10% of the sector constituents have a rating of 4 or higher.

...but we think ESG integration should go beyond credit ratings. Investors should be aware of what the CRAs include in their ratings, with a view toward determining whether they have different views of ESG risk at the instrument, issuer, or sector levels. Additionally, portfolio-level ESG risks, currency risk, event risks, structural ESG trends, and potential sector-level ESG blindspots should be identified and considered.

Products: Creating Dedicated Sustainability Strategies

While there are many ways to construct a sustainable investing strategy, all strategies share a common feature: using sustainability criteria to define the investment universe.

Below we outline four of the most popular fixed income sustainable investing strategies: exclusionary screening, positive screening, thematic exposure, and impact investing.

Exclusionary Screening

Negative and norms-based screening combine to form the most popular approach to sustainable investing. The most excluded sectors historically are tobacco, followed by military weapons/firearms, fossil fuels, and nuclear power generation, according to a 2018 report by US SIF on sustainable investing trends. Exclusionary screening can be based on sector, revenue exposure, country/region, or can be executed as an ESG tilt that excludes companies with poor ESG scores in areas such as emissions intensity. The decision to implement a negative screen is generally motivated by the following factors:

- **Values.** A values-based approach excludes sectors or poor ESG performers as the investor does not want to be associated with the perceived negative externalities of the target of the exclusion. For example, sectors that come under this category could include makers of cluster mines or nuclear weapons, where an investor may not want to be associated with the consequences of the use of those weapons.
- **Change.** Some investors exclude/divest certain parts of the market in order to elicit corporate or political change. In some instances, these strategies can take the form of coordinated divestment campaigns that articulate the type of change investors believe is necessary.

Removing any portion of the investible universe will cause some loss of diversification benefits – the magnitude of the loss will depend heavily on the number of screens applied, the weights of the screened sectors, and the time horizon of the investment strategy.

Positive Screening

Positive screening strategies involve investing in all sectors within the market, but reducing the investment universe to include (1) best-in-class performers on ESG metrics, and/or (2) identifying ESG improvers where improvement could positively impact bond value and spread performance. Positive screening strategies can be challenging due to the lack of consensus on ESG performance, the lag in ESG data reporting, and the potential for loss of diversification benefits.

- **Best-in-Class.** A best-in-class approach reduces the investible universe based on the investor's preference for ESG performance, which can be accomplished in a number of ways including: (1) using fundamental analysis to differentiate leaders and laggards on ESG by sector, focusing on specific ESG metrics that investors have high conviction will lead to superior performance, or (2) using a third-party composite score for overall ESG performance. The reliance on the subjective concept of overall ESG performance makes positive screening more challenging than applying negative screens based on sector, product, or revenue exposure. There is no consensus on what best-in-class ESG performance is, and evaluations of

the efficacy of this strategy often rely on third-party ESG raters' composite scores.

- ESG Improvers.** An ESG improvement strategy combined with an engagement approach presents investors with the opportunity to capture the value generated by ESG improvement over time. ESG improvers can be difficult to identify, because of the lags in both ESG reporting by issuers and updating of ESG scores by third-party raters. However, more dynamic momentum scores may be possible using ESG sentiment data, and progress can be judged through regular engagement with issuers.

Thematic Investing

Thematic investing can be a powerful tool for investors to advance sustainability goals without sacrificing returns, and will likely rise rapidly in popularity as investor interest in sustainability objectives grows. Thematic sustainability investors create portfolios where each issuer has some exposure to a specific sustainability theme. Common sustainability themes include low carbon exposure, financial inclusion, the circular economy, or gender equality. A portfolio might include securities from a range of fixed income asset classes, for example, an affordable housing portfolio could include a muni housing bond, a social bond from a financial earmarked for affordable housing lending, and MBS containing mortgages from marginalized populations.

The Sustainable Development Goals have emerged as an increasingly popular framework for thematic investing (Exhibit 14). In September 2015, the United Nations announced a new 2030 Agenda for Sustainable Development, which aims to reduce inequalities, prevent environmental degradation and promote social development globally. As part of this 2030 plan, 17 Sustainable Development Goals (SDGs) were announced as shown in Exhibit 14. Investors have adopted SDG investment strategies, constructing portfolios of issuers positively exposed to one of the 17 goals. "Exposure" can be defined in various ways, such as revenue exposure for corporates, SDG-linked debt for sovereigns, and green collateral for MBS.

Exhibit 14: The Sustainable Development Goals are increasingly used by both 1) issuers of ESG-labeled debt when defining impact, and 2) investors seeking to frame ESG objectives



Source: UNPRI

Impact Investing

An impact investing strategy can be used to make positive progress on specific, measurable environmental or social goals, but is the smallest segment of the sustainable investing market. The Global Impact Investing Network (GIIN) estimates that impact investing has now reached \$502bn in AUM, and most of this money is allocated outside public markets via private equity, private debt, and real assets. We think that impact investing in fixed income can be accomplished via a similar process as thematic investing but with a higher standard of portfolio reporting. It requires:

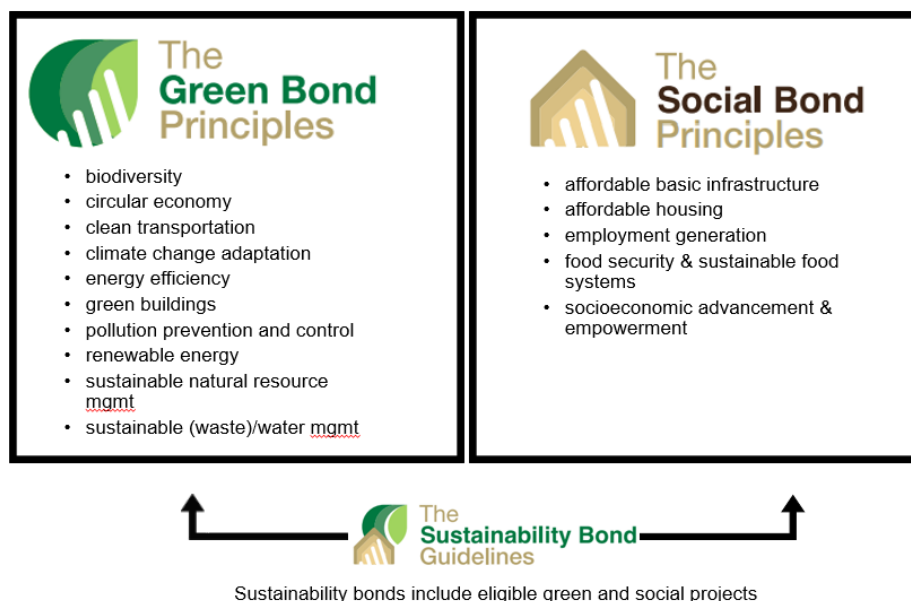
- Identifying one or more measurable, investible sustainability impacts;
- Identifying the investible universe of issuers whose debt can be used to (1) make a measurable, net positive impact on a sustainability challenge, (2) do not produce undesirable negative impacts on the investor's goals elsewhere, (3) can report on the impact metrics necessary to be included in the fund;
- Reporting regularly on the total impact of the fund's portfolio companies with metrics such as emissions avoided, or volume of materials recycled or reused.

ESG-Labeled Debt & Sustainable Investing

ESG-labeled debt is a unique feature of the fixed income markets, and has added to the misperception that specific securities are either "ESG" or "not ESG." In the text box below, we outline the accepted standards for ESG-labeled debt, a growing market segment with an estimated \$1.4 trillion in debt outstanding.

What's in the Label? Defining ESG-Labeled Debt

ESG-labeled debt securities are issued and marketed under green, social, sustainability, or sustainability-linked labels. Currently, these labels are non-binding from a legal and regulatory perspective, but bonds issued with these labels (and tagged as such in Bloomberg) tend to be generally aligned with the [International Capital Markets Association's \(ICMA\) Green, Social, and Sustainability Bond Principles](#), which set out the best practices for issuance.

Exhibit 15: ICMA's ESG-labeled debt best practices are the accepted market standard

Source: ICMA

ICMA's principles for ESG-labeled debt focus on four factors: use of proceeds, eligible projects, proceeds' management, and reporting. The use of proceeds is essentially the minimum requirement for labeled debt: capital raised under green, social, and sustainability bond labels must be earmarked for eligible environmental and social activities. [Exhibit 15](#) lists the eligible green and social project categories for "use of proceeds"-labeled debt. Notably, sustainability bonds allow issuers to use the bond's proceeds for both green and social projects. Proceeds must be managed separately from other corporate capital, and the issuer should report on the bond's use of proceeds annually until the bond matures. Additionally, the ICMA principles recommend external, independent review of the alignment of a labeled bond with the relevant principles.

Sustainability-linked bonds (SLB), the newest form of ESG-labeled debt, allows issuers to align their cost of debt capital with sustainability objectives. SLBs feature steps up and steps down in coupon rates based on the achievement of sustainability KPIs, essentially linking the debt cost of capital to the issuers's ESG performance. Notably, they allow the issuer an unrestricted use of proceeds. In June 2020, ICMA released the [Sustainability-Linked Bond Principles](#), which gave legitimacy to this type of bond structuring even though there had only been a single issuer of this type of debt at the time.

While ESG labels can make instrument-level ESG opportunities easier for investors to find, **we think that "unlabeled" debt with positive exposure to ESG factors will be the way forward for ESG-investing strategies in fixed income.** For example, our CMBS and Sustainability teams recently published a report identifying CMBS deals collateralized by buildings with [LEED](#) certifications. (See: [Sustainability / CMBSignals: 'Green' SASB - The Unlabeled ESG Opportunity](#).) Investors looking to apply a best-in-class ESG screen

to their portfolio might select – all else being equal – an unlabeled green SASB over a SASB without environmental efficiency standards. Similarly, ESG integration investors might consider the future costs of retrofitting SASB collateral to meet increasing green building regulations a material risk to the value of the security. If so, they might also choose a SASB with high green building standards over one without.

To reiterate, ESG-labeled debt is not an investing strategy, but this type of instrument can often be aligned with the sustainable investing strategies defined above. At ~\$1.4 trillion in debt outstanding globally, ESG-labeled debt accounts for less than 2% of the global fixed income markets. As such, there are few funds with portfolios comprised solely of labeled debt. Notably, because the majority (99%) of the ESG-labeled debt market is based on "use of proceeds" bonds with annual reporting, this type of debt is well-suited for thematic or impact-sustainable investment strategies.

Sustainable Investing Readiness: Challenges & Opportunities

Sustainable investing strategies face a number of significant challenges before they can be widely adopted across fixed income asset classes. There are material differences in the readiness of each fixed income asset class for sustainable investing strategies, and data availability remains *the* key hurdle. The complexity of fixed income instruments, issuers, and disclosure requirements combined with limited current understanding of material ESG drivers of asset pricing have led to an uneven ability to apply ESG strategies across asset classes. Below, we outline some of the challenges and opportunities for each asset class.

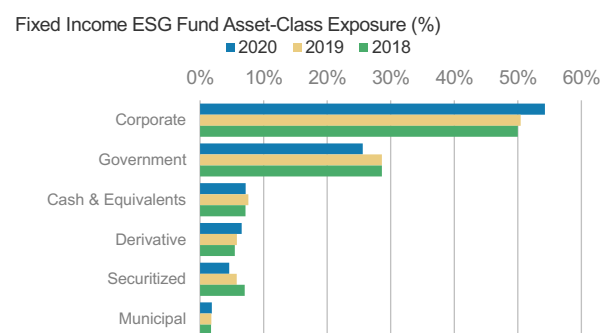
We view corporate credit as the most advanced asset class for sustainable investing, while securitized products lag their peers, as shown in Exhibit 16. The holdings of ESG-focused fixed income funds also support our views, with corporate debt being the largest component, followed by sovereigns (Exhibit 17). Munis are the least commonly held (2%), with securitized's share shrinking over the last two years (7% in 2018, 5% in 2020). That said, as we mentioned earlier, **ESG-focused funds often have a diversified mix of holdings across multiple asset classes.**

Exhibit 16: Corporate & SSA Credit are the most developed asset classes for ESG investing

	ESG Readiness Heat Map				
	ESG Integration	Negative Screening	Positive Screening	Thematic Investing	Impact Investing
Corporate Credit	Green	Green	Green	Green	Green
SSA Credit	Green	Green	Green	Green	Green
Municipals	Green	Green	Green	Green	Green
Non-Agency Securitized	Yellow	Red	Red	Red	Red
Agency Securitized	Yellow	Red	Red	Red	Red
CLOs	Yellow	Red	Red	Red	Red

Source: Morgan Stanley Research

Exhibit 17: Corporate debt is growing as a proportion of holdings in ESG-focused funds; securitized lags



Source: Morning Star

Corporate Credit

Corporate credit's leading share is largely due to the ability to map equity ESG strategies onto corporate debt. ESG data for corporate issuers – especially environmental data – is increasingly robust, making it feasible to integrate granular ESG factors into fundamental analysis of debt securities. There has also been increasing adoption of ESG frameworks, most notably the standards issued by the Sustainability Accounting Standards Board (SASB) and its [ESG Materiality Map](#). For fixed income investors seeking to identify and mitigate potential downside risks at the sector and issuer level, we think the SASB standards will be increasingly accepted as the consensus standard. Our MS Research sustainability framework, [Embedding Sustainability into Valuation](#), outlines our views on material ESG factors by sector. **Nearly 96% of ESG-focused funds incorporate some corporate credit to achieve their stated objectives, and the volume of corporate credit in ESG funds is growing (Exhibit 17).**

ESG data disclosure among developed market corporates has made creating thematic sustainable investing easier. For example, investors can map corporates' revenue exposure to ESG themes such as the circular economy, energy transition solutions, or sustainable agriculture, and create portfolios using debt from those issuers. Indeed, we increasingly hear from investors looking to identify sustainability leaders in the equity markets, in order to buy their debt. Our [Sustainable Solutions database](#) can help fixed income investors create thematic ESG, by mapping issuers with revenue or EBITDA exposure to five key sustainability themes. Importantly, corporates are increasingly mapping their businesses to the Sustainable Development Goals (SDG), which will make it easier for investors to identify thematic exposure opportunities.

Despite being the most developed asset class, corporate credit still faces ESG data challenges:

- **Isolating ESG effects.** It can be difficult to isolate the effect that ESG factors may have on price/yield performance at the individual-security level. Bonds may perform (or underperform) relative to ratings, sectors, maturity, embedded options, and myriad other factors.
- **Leveraged Loans/High Yield Market.** When valuations in fixed income get stretched, investors may look to the leveraged loan and high yield markets to increase portfolio yield. However, many of the companies in this space are private and may not disclose granular financial data, let alone ESG data.
- **EM issuers.** ESG data quality is much less robust among emerging market (EM) corporates, where investors look for yields when developed market (DM) credit spreads tighten. While, we expect this to improve as awareness and regulations increase, EM sustainable investing strategies may be difficult to apply to this market. We identified only three ESG funds that focus on EM corporates.
- **Social factors.** Corporate reporting of social factors remains limited across both DM and EM markets. This can make identifying leaders in diversity & inclusion, pay equity, and human capital management challenging, and limits the ability to apply dedicated thematic strategies.
- **Impact measurement.** Corporate ESG data disclosures are generally focused on quantifying performance, but not impact. Impact strategies often require an extra layer of analysis to quantify exactly how corporate activities are creating desired social or environmental impacts. For example, a fintech firm might report the number of people from an underbanked population who downloaded a banking app. An investor interested in financial inclusion would want to understand the impact of downloading the app. They might want to know: how many underbanked people were actually able to save or invest as a result of downloading the app? How is this positively impacting long-term wealth creation in that community?

Agencies, (Sub)Sovereigns, & Supranationals (SSAs)

All five ESG investing approaches are well-developed in the SSA asset classes. ESG investing in sovereigns, in particular, are aided by the ready availability of national development data, including sources such as the World Bank's [Sovereign ESG Data Portal](#), the WHO's [Global Health Security Index](#), Transparency International's [Corruption](#)

[Perceptions Index](#), and Freedom House's [Freedom in the World Index](#), among others. Investors can use datasets such as these to assess how governance and social factors might affect EM sovereign debt performance, or to apply negative or positive screens based on factors such as inequality, rule of law, and human rights. As the effects of climate change could become a destabilizing factor long term, we think that data on climate change vulnerability, climate resilience, and food security may become increasingly scrutinized by ESG investors.

The global SSA markets are fertile ground for SDG-aligned thematic/impact investing.

SSA issuers are often naturally aligned with ESG investing, particularly with the increasingly popularity of SDG investing. Supranationals, particularly multinational development banks (MDBs), are often wholly dedicated to sustainable development, and a handful are considered ESG "pure players." The World Bank for instance has aligned all of its activities with the 17 SDGs, and has recently begun to improve disclosure around its project-level progress and impact. The Asian Infrastructure Investment Bank (AIIB) has also aligned its expenditures with the SDGs, and we think that the debt of pure players can be reasonably considered "unlabeled" ESG bonds. Notably, the United Nations has been advancing its quantitative assessments of global progress toward the SDGs, and now releases [quarterly data](#) on 231 unique SDG indicators. There are sustainability funds that invest solely in the debt of MDBs, as they are often considered the best-in-class issuers for advancing sustainable development outcomes.

SSA ESG-labeled debt market expect to grow. COVID accelerated the ESG-labeled debt market among SSAs in 2020 (+2.3X y/y), and we think it will play a role in thematic investing moving forward. Some national government agencies are also increasingly raising debt capital under ESG labels, given their alignment with social objectives. This trend accelerated post-COVID, and we expect to see more of this in the future. French, Japanese, and South Korean national agencies have been the most forward-leaning in issuing social bonds to support COVID recovery, with bonds supporting unemployment programs, lending to SMEs, and affordable housing. Agencies from France, Japan and South Korea raised \$72 billion in ESG-labeled debt capital in 2020, compared to \$12.3 billion in 2019. Sovereigns are also increasingly issuing ESG-labeled debt across the credit spectrum – for instance, in 2020, Egypt issued the first EM high yield green bond ([EM Sovereign Credit Strategy: Egypt Green Bond Offers Value](#)). Our DM sovereigns analyst believes that European sovereigns and the EU will issue at least \$130 billion in ESG-labeled debt this year.

Data availability at the sub-sovereign (local government) level can be challenging. Data availability among local governments can be less robust than sovereign data, and can hamper thematic and impact-investing strategies in those asset classes.

ESG, GDP, and sovereign debt pricing may be difficult to disambiguate. The key challenge with understanding the relationship between ESG and sovereigns is the correlated nature of ESG indicators and GDP, with respect to sovereign debt performance. The sheer volume of potential ESG data at the sovereign level can make it difficult for investors to parse signal from noise.

Currencies. The final ESG frontier? We think ESG integration in currencies should not be overlooked – not so much for the intrinsic ESG qualities of the currency itself but for the sum of the various ESG-related flows that affect them. Exchange rates sit at the

intersection of all cross-border flows, of which many will be impacted by ESG trends. Trade and capital flows could be up-ended by the race to net zero, as national economies and corporates look to decarbonize economic activity. Energy importers of fossil fuels could become energy exporters of surplus renewable energy. Corporates that climb the ESG rankings will attract capital, as will those that provide solutions to the challenge of the climate crisis and social inequalities. Those that fall behind, will not. Fiscal policy will be increasingly green many economies and could even result in carbon borders being introduced, affecting the export competitiveness of economies with high carbon intensity. We think these trends will be highly divergent across different geographies, and expect that they will influence how exchange rates behave long-term.

Municipal Credit

We think that, long term, municipal credit will be an attractive asset class for ESG investing. Muni credit represents a ~\$3.8 trillion market with a natural alignment to sustainability objectives – bonds generally go toward community investment across a range of ESG themes. Muni revenue bonds that are used to invest in essential services such as water & sewer, public transportation, medical facilities, and colleges and universities could be aligned with the SDGs or other ESG themes such as "essential services," or "water conservation and management." Munis were early movers on green bonds and a record \$20 billion was issued last year, a 71% increase y/y. While only green-labeled bonds have been issued to date, we expect muni issuers to adopt the social and sustainability labels in the near term as well. Notably, much of the muni market could ostensibly be mapped onto [SDG #11 Sustainable Cities and Communities](#), particularly those focusing on affordable housing, public transportation, and green public spaces.

Despite the natural alignment with ESG investing, unlabeled muni bonds lack transparency on the use and management of proceeds. This can limit investors' ability to apply ESG investing strategies, particularly for impact and thematic approaches. Also, few muni issuers are structured for ESG engagement from investors. That said, investors *can* find a wide range of publicly available demographic and socioeconomic data to help estimate implied impact or exposure to ESG themes. However, doing so can be a labor-intensive process. Notably, only 1.5% of ESG-focused fixed income funds report having a muni-focused strategy, according to Morningstar data.

Securitized Products: Agency, Non-Agency, CLOs

We believe that the Securitized Products market represents an untapped ESG opportunity, but the lack of granular data on collateral represents a key challenge for ESG investors. The \$11 trillion MBS market could give investors exposure to sustainability themes such as energy-efficient buildings. Moreover, given the current investor focus on social factors and inequality post-COVID, we think the agency MBS market is particularly attractive for investors seeking exposure to themes such as "inclusive growth" and "access to homeownership" for vulnerable or marginalized populations. However, the general lack of disclosure about the potential ESG-friendly features of the collateral makes any sustainable investing strategy challenging. Pool-level data on MBS assets are important not just for thematic investing, but also for fundamental ESG integration and assessment of physical risk to collateral.

The CMBS market – particularly within agency multifamily – is the most developed in the issuance of ESG-labeled debt. Fannie Mae and Freddie Mac have both issued green and social agency CMBS, with Freddie also having issued a sustainable agency CMBS deal. 16% of annual gross issuance in this space has been labeled ESG since 2017. Non-agency CMBS also offers opportunities on the environmental side, even if largely [unlabeled](#) at the moment, through deals collateralized by buildings with LEED certifications.

The ESG-labeled debt issuance is nascent in agency MBS, and scarce elsewhere. The agency MBS market – which constitutes \$7 trillion of the outstanding mortgage debt – has recently begun issuing ESG-labeled debt. Fannie Mae has currently issued green MBS totaling \$111 million (0.0037% of issuance) since the beginning of 2020, out of a total of over \$3 trillion in gross issuance during that time period. In the non-agency market, ESG-labeled offerings have been even sparser, but there are early signs of the awareness of ESG labels. In December, MAXEX [announced](#) its intention to expand its support of minority-, women-, and veteran-owned lenders with preferred loan pricing. JP Morgan Chase has agreed to buy and securitize certain qualifying loans from the MAXEX program, adding liquidity to an underserved part of the mortgage market.

CLOs present the opportunity to link the more developed corporate credit ESG market and securitized products. Currently, the [limited](#) set of ESG-labeled CLOs largely use negative screening strategies, but we believe that in the near term we'll see CLOs collateralized with thematic ESG tilts. Carbon footprinting of the issuers underlying CLOs is already possible for some CLOs, and could result in investors seeking lower-carbon CLOs or reducing exposure to sectors facing climate transition risk. However, we note that CLOs often contain the debt of private companies that, as previously mentioned, may not disclose ESG data. (See: [Sustainability/CLO Strategy: A CLOser Look at ESG in CLOs](#).)

Disclosure Section

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TOTAL	3,448		823			1531	

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